

INDEX AND GLOSSARY

The numbers in parentheses at the beginning of each glossary entry indicate the pages on which that topic is discussed within the sefer.

A

- abdomen** (14–15, 207, 253): the section of the body located beneath the chest (ribs and diaphragm) and above the hips (pelvis). It is often called the “belly.” Most of the **digestive system** is in the abdomen and babies grow in the abdomens of their mothers.
- acid** (36, 103, 112, 127, 128–135, 149–154, 206–207): a **chemical** that yields **hydrogen cations** (otherwise known as **protons**) when it is put into water. See chapter 17, “Vinegar and Acids” for a detailed explanation.
- air pressure** (68–79, 84–85): a measure of the force that air exerts in an enclosed space (such as a bicycle tire), or in the **Earth’s atmosphere** on everything within it. See chapter 11, “Wind and Air Pressure.”
- alloy** (168–169): a **compound** of two or more different metallic elements. For example, brass is an alloy made from combining copper and zinc.
- altitude** (68, 71–72, 76–77, 84): the measure of the height of an object. Sometimes it is measured as the distance above ground level, and other times it is measured as the distance above **sea level**. See Figure 12.7.
- amino acid** (115–117, 206): small **molecules** that have a **nitrogen**-containing group of atoms called amino ($-\text{NH}_3^+$) and a **carbon**-containing group of atoms called carboxylic acid ($-\text{CO}_2^-$). There are about five hundred types of naturally occurring amino acids, but only twenty-one of them are the building blocks of all the **proteins** in humans, and in fact just twenty-two are used in all the proteins in all known life forms. See chapter 15, “Bread and Nutrition,” and especially Figure 15.4 for further details.
- ammonia** (220): a small **molecule** (NH_3) comprising one **nitrogen atom** bonded with three **hydrogen atoms**. It is a colorless **gas** with a very sharp, easily recognizable smell. Most ammonia is used to make fertilizers. It is also used to manufacture plastics, explosives, and other chemicals.
- amplitude** (250, 253–256): for something **vibrating**, its amplitude is the magnitude of the vibration. For instance, in **sound waves** it is a measure of the number of air **molecules** that are vibrating, and for light waves it is a measure of the number of **photons** that are coming from the light source. See Figure 31.9.